

Exploring the Extreme			
2005 Science			
Curriculum Framework			
Arkansas Science			
Grade K			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	AR	SCI.K.NS.1.K.3.a	Conduct scientific investigations as a class and in teams (lab activities)
Finding the Center of Gravity Using Rulers	AR	SCI.K.NS.1.K.3.b	Conduct scientific investigations as a class and in teams (field studies)
Finding the Center of Gravity Using Rulers	AR	SCI.K.NS.1.K.6	Collect empirical evidence as a class
Finding the Center of Gravity Using Rulers	AR	SCI.K.PS.6.K.1.a	Demonstrate spatial relationships, including but not limited to (over)
Finding the Center of Gravity Using Rulers	AR	SCI.K.PS.6.K.1.b	Demonstrate spatial relationships, including but not limited to (under)
Finding the Center of Gravity Using Rulers	AR	SCI.K.PS.6.K.1.c	Demonstrate spatial relationships, including but not limited to (left)
Finding the Center of Gravity Using Rulers	AR	SCI.K.PS.6.K.1.d	Demonstrate spatial relationships, including but not limited to (right)
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Grade 1			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	AR	SCI.1.NS.1.1.3.a	Conduct scientific investigations as a class and in teams (lab activities)
Finding the Center of Gravity Using Rulers	AR	SCI.1.NS.1.1.3.b	Conduct scientific investigations as a class and in teams (field studies)
Finding the Center of Gravity Using Rulers	AR	SCI.1.NS.1.1.5	Collect measurable empirical evidence as a class and in teams
Finding the Center of Gravity Using Rulers	AR	SCI.1.NS.1.1.6	Make predictions as a class and in teams based upon empirical evidence (e.g., predict which object is heavier)
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Grade 2			

Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	AR	SCI.2.NS.1.2.3.a	Conduct scientific investigations individually and in teams (lab activities)
Finding the Center of Gravity Using Rulers	AR	SCI.2.NS.1.2.3.b	Conduct scientific investigations individually and in teams (field studies)
Finding the Center of Gravity Using Rulers	AR	SCI.2.NS.1.2.5	Collect measurable empirical evidence in teams and as individuals
Finding the Center of Gravity Using Rulers	AR	SCI.2.NS.1.2.6	Make predictions in teams and as individuals based upon empirical evidence
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Grade 3			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	AR	SCI.3.NS.1.3.3.a	Conduct scientific investigations individually and in teams (lab activities)
Finding the Center of Gravity Using Rulers	AR	SCI.3.NS.1.3.3.b	Conduct scientific investigations individually and in teams (field studies)
Finding the Center of Gravity Using Rulers	AR	SCI.3.NS.1.3.4	Communicate the results of scientific investigations (e.g., age-appropriate graphs, charts, and writings)
Finding the Center of Gravity Using Rulers	AR	SCI.3.NS.1.3.6	Collect and analyze measurable empirical evidence as a team and/or as individuals
Finding the Center of Gravity Using Rulers	AR	SCI.3.NS.1.3.7	Make and explain predictions based on prior knowledge
Finding the Center of Gravity Using Plumb Lines	AR	SCI.3.NS.1.3.3.a	Conduct scientific investigations individually and in teams (lab activities)
Finding the Center of Gravity Using Plumb Lines	AR	SCI.3.NS.1.3.3.b	Conduct scientific investigations individually and in teams (field studies)
Finding the Center of Gravity Using Plumb Lines	AR	SCI.3.NS.1.3.4	Communicate the results of scientific investigations (e.g., age-appropriate graphs, charts, and writings)
Finding the Center of Gravity Using Plumb Lines	AR	SCI.3.NS.1.3.6	Collect and analyze measurable empirical evidence as a team and/or as individuals
Finding the Center of Gravity Using Plumb Lines	AR	SCI.3.NS.1.3.7	Make and explain predictions based on prior knowledge

Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.1.e	Communicate observations orally, in writing, and in graphic organizers (frequency tables)
Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.3.a	Conduct scientific investigations individually and in teams (lab activities)
Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.3.b	Conduct scientific investigations individually and in teams (field studies)
Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.4	Communicate the results of scientific investigations (e.g., age-appropriate graphs, charts, and writings)
Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.6	Collect and analyze measurable empirical evidence as a team and/or as individuals
Changing the Center of Gravity Using Moment Arms	AR	SCI.3.NS.1.3.7	Make and explain predictions based on prior knowledge
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Grade 4			
Activity/Lesson	State	Standards	
Finding the Center of Gravity Using Rulers	AR	SCI.4.NS.1.4.3.a	Conduct scientific investigations individually and in teams (lab activities)
Finding the Center of Gravity Using Rulers	AR	SCI.4.NS.1.4.3.b	Conduct scientific investigations individually and in teams (field studies)
Finding the Center of Gravity Using Rulers	AR	SCI.4.NS.1.4.7	Collect and interpret measurable empirical evidence in teams and as individuals
Finding the Center of Gravity Using Rulers	AR	SCI.4.NS.1.4.8	Develop a hypothesis based on prior knowledge and observations
Finding the Center of Gravity Using Plumb Lines	AR	SCI.4.NS.1.4.3.a	Conduct scientific investigations individually and in teams (lab activities)
Finding the Center of Gravity Using Plumb Lines	AR	SCI.4.NS.1.4.3.b	Conduct scientific investigations individually and in teams (field studies)
Finding the Center of Gravity Using Plumb Lines	AR	SCI.4.NS.1.4.7	Collect and interpret measurable empirical evidence in teams and as individuals
Finding the Center of Gravity Using Plumb Lines	AR	SCI.4.NS.1.4.9	Identify variables that affect investigations
Changing the Center of Gravity Using Moment Arms	AR	SCI.4.NS.1.4.1.e	Communicate observations orally, in writing, and in graphic organizers (frequency tables)

Changing the Center of Gravity Using Moment Arms	AR	SCI.4.NS.1.4.3.a	Conduct scientific investigations individually and in teams (lab activities)
Changing the Center of Gravity Using Moment Arms	AR	SCI.4.NS.1.4.3.b	Conduct scientific investigations individually and in teams (field studies)
Changing the Center of Gravity Using Moment Arms	AR	SCI.4.NS.1.4.7	Collect and interpret measurable empirical evidence in teams and as individuals
Changing the Center of Gravity Using Moment Arms	AR	SCI.4.NS.1.4.8	Develop a hypothesis based on prior knowledge and observations
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Grade 5			
Activity/Lesson	State	Standards	
Jet Propulsion	AR	SCI.5.NS.1.5.1	Make accurate observations
Jet Propulsion	AR	SCI.5.NS.1.5.2.d	Identify and define components of experimental design used to produce empirical evidence (appropriate use of control)
Jet Propulsion	AR	SCI.5.NS.1.5.2.e	Identify and define components of experimental design used to produce empirical evidence (use of standardized variables)
Vectoring	AR	SCI.5.NS.1.5.1	Make accurate observations
Vectoring	AR	SCI.5.NS.1.5.2.d	Identify and define components of experimental design used to produce empirical evidence (appropriate use of control)
Vectoring	AR	SCI.5.NS.1.5.2.e	Identify and define components of experimental design used to produce empirical evidence (use of standardized variables)
Vectoring	AR	SCI.5.NS.1.5.5	Communicate results and conclusions from scientific inquiry
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Grade 6			
Activity/Lesson	State	Standards	
Jet Propulsion	AR	SCI.6.NS.1.6.1	Verify accuracy of observations

Jet Propulsion	AR	SCI.6.NS.1.6.2.d	Apply components of experimental design used to produce empirical evidence (appropriate use of control)
Jet Propulsion	AR	SCI.6.NS.1.6.2.e	Apply components of experimental design used to produce empirical evidence (use of standardized variables)
Jet Propulsion	AR	SCI.6.PS.6.6.7.a	Describe the effects of force (move a stationary object)
Vectoring	AR	SCI.6.NS.1.6.1	Verify accuracy of observations
Vectoring	AR	SCI.6.NS.1.6.2.d	Apply components of experimental design used to produce empirical evidence (appropriate use of control)
Vectoring	AR	SCI.6.NS.1.6.2.e	Apply components of experimental design used to produce empirical evidence (use of standardized variables)
Vectoring	AR	SCI.6.NS.1.6.5	Communicate results and conclusions from scientific inquiry
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Grade 7			
Activity/Lesson	State	Standards	
Vectoring	AR	SCI.7.NS.1.7.1	Interpret evidence based on observations
Vectoring	AR	SCI.7.NS.1.7.2.d	Analyze components of experimental design used to produce empirical evidence (appropriate use of control)
Vectoring	AR	SCI.7.NS.1.7.2.e	Analyze components of experimental design used to produce empirical evidence (use of standardized variables)
Vectoring	AR	SCI.7.NS.1.7.5	Communicate results and conclusions from scientific inquiry
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Grade 8			
Activity/Lesson	State	Standards	
Vectoring	AR	SCI.8.NS.1.8.2.d	Evaluate the merits of empirical evidence based on experimental design (appropriate use of control)
Vectoring	AR	SCI.8.NS.1.8.2.e	Evaluate the merits of empirical evidence based on experimental design (use of standardized independent and dependent variables)
Vectoring	AR	SCI.8.NS.1.8.7	Communicate results and conclusions from scientific inquiry following peer review